

SMOKE ALARM USER'S GUIDE MODEL i9040CA • 9 Volt Battery Operated Smoke Alarm

This product is designed to detect products of combustion using the ionization technology. It contains 0.9 microcurie of Americium 241, a radioactive material. Distributed under U.S. NRC License No. 32-23858-01E. Manufactured in compliance with U.S. NRC safety criteria in 10 CFR 32.27. The purchaser is exempt from any regulatory requirements. Do not try to repair the smoke alarm yourself. Refer to the instructions in section 11 for service.

WARNING! ALARM WILL NOT ATTACH TO MOUNTING PLATE UNLESS BATTERY IS PRESENT, REMOVAL OF BATTERY WILL RENDER THE SMOKE ALARM INOPERATIVE

IMPORTANT! READ ALL INSTRUCTIONS BEFORE INSTALLATION AND KEEP THIS MANUAL NEAR THE ALARM FOR FUTURE

#### **CONTENTS OF THIS MANUAL**

- 01 ... RECOMMENDED LOCATIONS
- 02 ... LOCATIONS TO AVOID
- 03 ... INSTALLATION INSTRUCTIONS
- 04 ... OPERATION AND TESTING
- 05 ... NUISANCE ALARMS
- 06 ... MAINTENANCE
- 07 ... LIMITATIONS OF SMOKE ALARMS
- 08 ... GOOD SAFETY HABITS
- 09 ... NRC INFORMATION
- 10 ... NFPA REQUIRED PROTECTION
- 11 ... SERVICE AND WARRANTY

Manual P/N 820-1667 Rev. A XXXX-XXXX-XX

### RECOMMENDED LOCATIONS

- Locate the first alarm in the immediate area of the sleeping rooms. Try to monitor the exit path as the sleeping rooms are usually farthest from the exit. If more than one sleeping area exists, locate additional alarms in each sleeping area.
- Locate additional alarms to monitor any stairway as stairways act like chimneys for smoke and heat.
- Locate at least one alarm on every floor level.
- · Locate an alarm in every sleeping room.
- Locate an alarm in every room where electrical appliances are operated (i.e. portable heaters or humidifiers).
- Locate an alarm in every room where someone sleeps with the door closed. The closed door may prevent an alarm not located in that room from waking the
- . Smoke, heat, and combustion products rise to the ceiling and spread horizontal Mounting the smoke alarm on the ceiling in the center of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction.
- When mounting an alarm on the ceiling, locate it at a minimum of 10cm (4") from the side wall. (see Image 2B)



## Smoke Alarms for Minimum Protection

 Smoke Alarms for Additional Protection △ Ionization Type Smoke Alarm with HUSH® Control or Photoelectric Typ

## SINGLE FLOOR PLAN

IMAGE 1A

# MULTIPLE FLOOR PLAN

# IMAGE 1B

- When mounting the alarm on the wall, use an inside wall with the top edge of the alarm at a minimum of 10cm (4") and a maximum of 30.5cm (12") below the ceiling (see Image 2B).
- Put smoke alarms at both ends of a bedroom hallway or large room if the hallway or room is more than 9.1m (30') long.
- Install Smoke Alarms on sloped, peaked or cathedral ceilings at or within 0.9m (3ft) of the highest point (measured horizontally). NFPA 72 states: "Smoke alarms in rooms with ceiling slopes greater than .3m in 2.4m (1ft in 8ft) horizontally shall be located on the high side of the room." NFPA 72 states: "A row of alarms shall be spaced and located within 0.9m (3ft) of the peak of the ceiling measured include electrical boxes exposed to these environments. horizontally" (see Image 2B).

- In homes that are not well insulated, extreme heat or cold can be transferred from the outside to the inside through poorly insulated walls and roof. This may create a thermal barrier which can prevent the smoke from reaching an alarm mounted on the ceiling. If you are not sure about the insulation in your home, or if you notice that the outer walls and ceiling are either hot or cold, install the alarm on an inside wall. In such homes, install the smoke alarm with the top edge of the alarm at a minimum of 10 cm (4") and a maximum of 30.5 cm (12") below the ceiling (see image 2A and B).
- Install Smoke Alarms on tray-shaped ceilings (coffered ceilings) on the highest portion of the ceiling or on the sloped portion of the ceiling within 12" (305mm) vertically down from the highest point (see image 2D).
- For mobile home installation, select locations carefully to avoid thermal barriers that may form at the ceiling. For more details, see MOBILE HOME INSTALLATION.

#### MOBILE HOME INSTALLATION

Modern mobile homes have been designed to be energy efficient. Install smoke alarms as recommended in RECOMMENDED LOCATIONS and Images 1A & 1B.

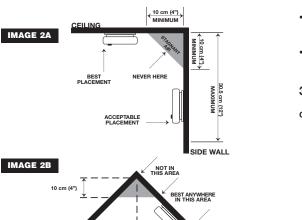
In older mobile homes that are not well insulated compared to present standards, extreme heat or cold can be transferred from the outside to the inside through poorly insulated walls and roof. This may create a thermal barrier which can prevent the smoke from reaching an alarm mounted on the ceiling. In such units, install the smoke alarm on an inside wall with the top edge of the alarm at a minimum of 10cm (4") and a maximum of 30.5cm (12") below the ceiling (see Image 2A, B & C).

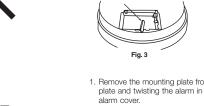
If you are not sure about the insulation in your mobile home, or if you notice that the outer walls and ceiling are either hot or cold, install the alarm on an inside wall. For minimum protection, install at least one alarm close to the bedrooms. For additional protection, see Image 1A & B.

WARNING: TEST YOUR SMOKE ALARM OPERATION AFTER MOBILE HOME HAS BEEN IN STORAGE, BEFORE EACH TRIP AND AT LEAST ONCE A IMAGE 2C WEEK DURING USE.

#### 2. LOCATIONS TO AVOID

- Do not install within 0.9 m (3') of the following: The door to a kitchen, or a bathroom that contains a tub or shower, forced air supply ducts used for heating or cooling, ceiling or whole house ventilating fans, or other high airflow areas.
- Do not place the alarm where drapes or other objects will block the sensor. Smoke must be able to reach the sensor to accurately detect conditions.
- Do not install in peaks of vaulted ceilings, "A" frame ceilings or gabled roofs. (Less than 10 cm (4") from the peak of an "A" frame type ceiling.)
- Install at least 30.5 cm (12") away from fluorescent lights as electronic noise may cause nuisance alarms.
- IMAGE 2D Keep out of insect infested areas. Avoid excessively dusty, dirty or greasy areas. Dust particles may cause nuisance alarms or failure to alarm.
- Extreme temperatures may effect the sensitivity of the alarm. Do not install in areas where the temperature is colder than 4.4°C (40°F) or hotter than 37.8°C (100°F), such as garages and unfinished attics; this should also
- Do not install in areas where the relative humidity (RH) is greater than 85%. Very humid areas, with moisture or steam, can cause nuisance alarms.
- Avoid placing ionization smoke alarms in kitchen areas. Normal cooking may cause nuisance alarms. If a kitchen alarm is desired, it should have an alarm silence feature or be a photoelectric type.

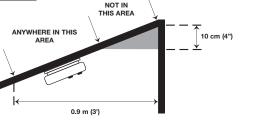




that purpose.

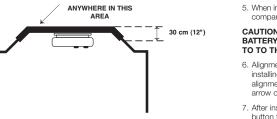
Fig. 1

start vour automobile.



0.9 m (3') > 0.9 m (3')

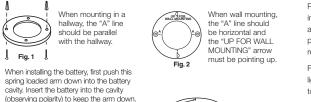
HORIZONTAL DISTANCE FROM PEAK

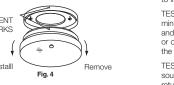


- Smoke alarms are not to be used with detector quards unless the combination (alarm and guard) has been evaluated and found suitable for
- Do not place in the garage. Particles of combustion are present when you is cleared.

### 3. INSTALLATION INSTRUCTIONS

CAUTION: THIS UNIT IS SEALED. THE COVER IS NOT REMOVABLE





- 1. Remove the mounting plate from the back of the alarm by holding the mounting plate and twisting the alarm in the direction indicated by the "OFF" arrow on the
- 2. To ensure aesthetic alignment of the alarm with the hallway or wall, the "A" line on the mounting plate should be parallel with the hallway when ceiling mounting or horizontal when wall mounting.
- After selecting the proper smoke alarm location as described in Section 1. attach the mounting plate to the ceiling as shown in Figure 1. For wall mounting see Figure 2. Place mounting plate on the wall. Be sure the "UP FOR WALL MOUNTING" text and arrow are facing up. Use the screws and anchors provided to secure the mounting plate.
- 4. Battery installation instructions are provided on the inside of the battery compartment. To ensure proper installation of the smoke alarm battery, follow the instructions.
- 5. When installing the battery, press the battery reminder tab down into the battery compartment and install the battery (see Figure 3).

CAUTION: IF THE BATTERY REMINDER TAB IS NOT HELD DOWN IN THE BATTERY COMPARTMENT BY THE BATTERY, THE UNIT WILL NOT ATTACH TO TO THE MOUNTING PLATE.

- 6. Alignment marks are provided on the edge of the trim plate and the alarm. After installing the mounting plate, place the alarm on the mounting plate with the alignment marks lined up. Twist the alarm in the direction indicated by the "ON" arrow on the alarm cover (see Figure 4) until it locks in place.
- 7. After installation, test your alarm by depressing and holding down the test button for at least 5 seconds. This should sound the alarm.

CAUTION: DUE TO THE LOUDNESS (85 DECIBELS) OF THE ALARM, ALWAYS STAND AN ARMS-LENGTH AWAY FROM THE UNIT WHEN TESTING.

#### 4. OPERATION AND TESTING

The smoke alarm is operating once a fresh battery is installed and testing is complete

OPERATION: When products of combustion are sensed, the unit sounds a loud 85db pulsating alarm, and the red LED rapidly flashes every 2 seconds until the air

HUSH CONTROL: The "HUSH" feature has the capability of temporarily

desensitizing the alarm circuit for approximately 8 minutes. This feature is to be used only when a known alarm condition, such as smoke from cooking, activates the alarm. Model i9040CA is desensitized by pushing the TEST/HUSH button on the cover. If the smoke is not too dense, the alarm will silence immediately and the Red LED will flash once every 10 seconds for approximately 8 minutes. This

indicates that the alarm is in a temporarily desensitized condition. The smoke NOTE: WEEKLY TESTING IS REQUIRED. alarm will automatically reset after approximately 8 minutes and sound the alarm i WARNING! USE ONLY THE BATTERIES SPECIFIED. USE OF DIFFERENT particles of combustion are still present. The "HUSH" feature can be used BATTERIES MAY HAVE A DETRIMENTAL EFFECT ON THE UNIT. repeatedly until the air has been cleared of the condition causing the alarm.

CLEANING YOUR ALARM FLASHING LED LIGHT: This smoke alarm is equipped with a flashing red indicator light. The red LED is located under the test button and will flash every 40 seconds to indicate that the smoke alarm is receiving power. NOTE: Clean the alarm at least once a year, for proper operation.

To clean your alarm, remove it from the mounting bracket as outlined in the beginning TESTING: Test by pushing the test button on the cover and holding it down for a of this section. You can clean the interior of your alarm (sensing chamber) by minimum of 5 seconds. This will sound the alarm if the electronic circuitry, alarm. using compressed air or a vacuum cleaner hose and blowing or vacuuming and battery are working. If the alarm does not sound, the unit has defective batteries through the openings around the perimeter of the alarm. The outside of the alarm or other failure. DO NOT use an open flame to test your alarm, you could damage can be wiped with a damp cloth. After cleaning, reinstall your alarm, Test your the alarm or ignite combustible materials and start a structure fire. alarm by using the test button. If cleaning does not restore the alarm to normal

TEST THE ALARM WEEKLY TO ENSURE PROPER OPERATION: An erratic or low operation, the alarm should be replaced. sound coming from your alarm may indicate a defective alarm, and it should be returned for service (see Section 11).

#### NOTE: WEEKLY TESTING IS REQUIRED.

#### 5. FALSE ALARMS

Smoke alarms are designed to minimize nuisance alarms. Cigarette smoke will not normally set off the alarm, unless the smoke is blown directly into the alarm. Combustion particles from cooking may set off the alarm if the alarm is located close to the cooking area. Large quantities of combustible particles are generated from spills or when broiling. Using the fan on a range hood which vents to the outside (non-recirculating type) will also help remove these combustible products from the kitchen.

If the alarm does alarm, check for fires first. If a fire is discovered, get out and call the fire department. If no fire is present, check to see if one of the reasons listed in Section 2 may have caused the alarm.

#### 6. MAINTENANCE

### BATTERY REPLACEMENT

Note: Replacement batteries are available where you purchased your alarm

To replace the battery, remove the alarm from the mounting plate by rotating the alarm in the direction of the "OFF" arrow on the cover (see Section 3, Figure 1).

The Model 0914CA Smoke Alarm is powered by a 9V carbon zinc battery (alkaline and lithium batteries may also be used). A fresh battery should last for one year under normal operating conditions. This alarm has a low battery monitor circuit

which will cause the alarm to "chirp" approximately every 30 seconds for a minimum of seven days when the battery gets low. Replace the battery when Continued chirping after battery replacement may indicate defective circuitry, and

the alarm should be returned for service (see Section 11)

REPLACEMENT.

Carbon Zinc Type:

USE ONLY THE FOLLOWING 9 VOLT BATTERIES FOR SMOKE ALARM

EVEREADY 1222:

GOLD PEAK 1604P 1604S

MX1604: GOLD PEAK 1604A:

6AM6X, AND 6LR61 (GA)

ULTRALIFE U9VL-J

7. LIMITATIONS OF SMOKE ALARMS

WARNING: PLEASE READ CAREFULLY AND THOROUGHLY.

NFPA 72 states: Fire-warning equipment for residential occupancies are

capable of protecting about half of the occupants in potentially fatal fires.

mentally impaired such that they cannot escape even when warned early

Victims are often intimate with the fire, too old or too young, or physically or

enough that escape should be possible. For these people, other strategies

. Smoke alarms are devices that can provide early warning of possible fires at a

alarms may detect invisible fire particles (associated with fast flaming fires)

sooner than photoelectric alarms. Photoelectric sensing alarms may detect

unpredictable. For maximum protection, Fire Sentry recommends that both

A.C. powered alarms (without battery backup) will not operate if the A.C. power

A battery powered alarm must have a battery of the specified type, in good

Smoke alarms must be tested regularly to make sure the batteries and the

Smoke alarms cannot provide an alarm if smoke does not reach the alarm.

Therefore, smoke alarms may not sense fires starting in chimneys, walls, on

If the alarm is located outside the sleeping room or on a different floor, it may

has been cut off, such as by an electrical fire or an open fuse.

roofs, on the other side of a closed door or on a different floor.

visible fire particles (associated with slow, smouldering fires) sooner than

ionization alarms. Home fires develop in different ways and are often

ionization and photoelectric alarms be installed.

alarm circuits are in good operating condition.

condition and installed properly.

not wake up a sound sleeper.

such as protection-in-place or assisted escape or rescue would be necessary.

reasonable cost; however, alarms have sensing limitations. Ionization sensing

ENERGIZER 522: DURACELL MN1604.

PANASONIC 6AM6, 6AM-6, 6AM-6PI

 The use of alcohol or drugs may also impair one's ability to hear the smoke alarm. For maximum protection, a smoke alarm should be installed in each sleeping area on every level of a home.

#### Although smoke alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners and renters should have adequate insurance to protect their lives and property.

### 8. GOOD SAFETY HABITS

#### Develop and practice a plan of escape!

- Make a floor plan indicating all doors and windows and at least two (2) escape routes from each room. Second story windows may need an escape ladder.
- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire.
- Determine a place outside your home where you all can meet if a fire occurs
- Familiarize everyone with the sound of the smoke alarm and train them to leave your home when they hear it.
- Practice a fire drill at least every six months, including fire drills at night. Ensure that small children hear the alarm and wake when it sounds. They must wake up in order to execute the escape plan. Practice allows all occupants to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do.
- Install and maintain fire extinguishers on every level of the home and in the kitchen, basement and garage. Know how to use a fire extinguisher prior to ar emergency.
- are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.
- ALARM EXIT PROCEDURE

Current studies have shown smoke alarms may not awaken all sleeping

individuals, and that it is the responsibility of individuals in the household that

- Alert small children in the home.
- · Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.
- In leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, don't open that door! Instead, use your alternate exit. If the inside of the door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
- . Stay close to the floor if the air is smoky. Breathe shallowly through a cloth, we
- Don't return to your home until the fire officials say that it is all right to do s

There are situations where a smoke alarm may not be effective to protect against 11. SERVICE AND WARRANTY fire as noted by the NFPA and UL. For instance:

- a) smoking in bed b) leaving children home alone
- c) cleaning with flammable liquids, such as gasoline
- d) fires where the victim is intimate with a flaming initiated fire;
- for example, when a person's clothes catch fire while cooking
- e) fires where the smoke is prevented from reaching the detector due to a closed door or other obstruction
- f) incendiary fires where the fire grows so rapidly that an occupant's egress is blocked even with properly located detectors

#### NRC INFORMATION

Regulatory Commission

Ionization type smoke alarms use a very small amount of a radioactive element in the sensing chamber to enable detection of visible and invisible combustion products. The radioactive element is safely contained in the chamber and requires no adjustments or maintenance. This smoke alarm meets or exceeds all government standards. It is manufactured and distributed under license from the U.S. Nuclear

#### 10. NFPA REQUIRED PROTECTION

The National Fire Protection Association's Standard 72 provides the following information:

Smoke Detection. Where required by applicable laws, codes, or standards for a specific type of occupancy, approved single- and multiple-station smoke alarms shall be installed as follows:

- (1) In all sleeping rooms and guest rooms
- (2) Outside of each separate dwelling unit sleeping area, within 6.4 m (21 ft) of any door to a sleeping room, the distance measured along a path of travel
- (3) On every level of a dwelling unit, including basements
- (4) On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics

(6) In the living area(s) of a residential board and care occupancy (small facility)

(5) In the living area(s) of a guest suite

#### Smoke Detection - Are More Smoke Alarms Desirable?

Required number of smoke alarms (as shown in Image 1A and Image 1B): The required number of smoke alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke alarms. For this reason, the use of additional smoke alarms for those areas for increased protection is recommended.

The additional areas include the basement, bedrooms, dining room, furnace room · Once outside, go to your selected meeting place and make sure everyone is utility room, and hallways not protected by the required smoke alarms. The installation of smoke alarms in kitchens, attics (finished or unfinished), or garages Call the fire department from your neighbor's home-not from yours! is not normally recommended, because these locations occasionally experience conditions that can result in improper operation.

> Alarms should be installed in accordance with the National Fire Protection Association's Standard 72 (NFPA, Batterymarch Park, Quincy, MA 02269).

> > Notify your local fire department and insurance company of your smoke alarm installation

If after reviewing this manual you feel that your smoke alarm is defective in any way. do not tamper with the unit. In many cases, the quickest way to exchange your alarm is to return it to the original place of purchase. Alternatively, you may return it for servicing. If you have questions, call Customer Service at 1-800-880-6788.

## ire Sentry warrants to the original purchaser that this enclosed smoke alarm (but

ONE YEAR LIMITED WARRANTY

not the battery) will be free from defects in material and workmanship or design under normal use and service for a period of one year from the date of purchase. ne obligation of Fire Sentry under this warranty is limited to repairing or

replacing this smoke alarm or any part which we find to be defective in material. workmanship or design, free of charge to the customer, upon sending this smoke alarm with proof of date of purchase, postage and return postage orepaid, to Fire Sentry, P.O. Box 40, Apsley, ON KOL 1A0, 1-800-880-6788, his warranty shall not apply to this smoke alarm if it has been damaged,

odified, abused or altered after the date of purchase or if it fails to operate due to improper maintenance or inadequate AC or DC electrical power. ne liability of Fire Sentry or any of its parent or subsidiary corporations arising

shall not in any case exceed the cost of replacement of this smoke alarm and, n no case shall Fire Sentry or any of its parent or subsidiary corporations be iable for consequential loss or damages resulting from the failure of this smoke alarm or for breach of this or any other warranty, express or implied, even if the oss or damage is caused by the company's negligence or fault.

damages, the above limitations or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights which vary from province to province.

ne above warranty may not be altered except in writing signed by both

parties hereto.

# from the sale of this smoke alarm or under the terms of this limited warranty

ince some provinces do not allow limitations on the duration of an implied warranty or do not allow the exclusion or limitation of incidental or consequential

so, Fire Sentry makes no warranty, express or implied, written or oral, cluding that of merchantability or fitness for any particular purpose, with respect to the battery.